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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/721,773 | 11/25/2003 | Daniel F. Handman | 3586.1000-001 | 4185 |
| 21005 | 7590 | 08/27/2007 | EXAMINER | |
| HAMILTON, BROOK, SMITH & REYNOLDS, P.C. | | | GEISEL, KARA E | |
| 530 VIRGINIA ROAD | | | ART UNIT | PAPER NUMBER |
| P.O. BOX 9133 | | | 2877 | |
| CONCORD, MA 01742-9133 | | | | |

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| 08/27/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|----------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/721,773 | HANDMAN ET AL. |
| | Examiner Kara E. Geisel | Art Unit 2877 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 June 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2,4-22 and 24-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1,2,4-19,21,22,24-42,44-58 and 62-68 is/are allowed.
- 6) Claim(s) 20,43 and 59 is/are rejected.
- 7) Claim(s) 60 and 61 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments and the amendments, see the amendment, filed June 1st, 2007 (pages 13-14), with respect to claims 21-22, 24-40, 45, 53-58, and 62-64 have been fully considered and are persuasive. The rejection based on 35. U.S.C. 101 has been withdrawn.

The indicated allowability of claims 20, 43, and 59 is withdrawn in view of the newly discovered reference(s) to Butler et al. (US Pubs 2002/0162978). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20, 43, and 59 are rejected under 35 U.S.C. 102(e) as being anticipated by Butler et al. (US Pubs 2002/0162978).

In regards to claims 20 and 43, Butler discloses a blade (fig. 12) comprising an electromagnetic radiation source (504) coupled to the blade, the electromagnetic radiation source emitting a beam (508), and an array of electromagnetic radiation sensors (506) coupled to the blade to receive radiation from the

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radiation source, responses of the sensors indicating orientation of the beam with respect to the array (¶ 115).

In regards to claim 59, the blade further comprises a processor to process the responses of the sensors to determine a twist of the blade (fig. 3, 14 and ¶ 59).

Allowable Subject Matter

Claims 1-2, 4-19, 21-22, 24-42, 44-58, and 62-64 are allowed over the prior art of record for the reasons set forth in the previous Office Actions (paper numbers 0506 and 20070201).

Claims 60-61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 60, the prior art of record, taken alone or in combination, fails to disclose or render obvious a blade, comprising a second electromagnetic radiation source coupled to the blade, the second electromagnetic source emitting a second beam, and a second array of electromagnetic radiation sensors coupled to the blade to receive radiation from the second radiation source, responses of the second array of sensors indicating orientation of the second beam with respect to the second array, in combination with the rest of the limitations of claim 60.

As to claim 61, the prior art of record, taken alone or in combination, fails to disclose or render obvious a blade, wherein a beam is a cross-shaped cross-section beam, in combination with the rest of the limitations of claim 61.

Additional Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art made of record is Hodge (USPN 6,487,914). The prior art being clarified is Breecher et al. (USPN 4,334,775), previously cited.

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Hodge discloses an apparatus for determining changes in the shape of an object or for determining flow of a fluid around an object comprising an electromagnetic radiation source coupled to the object, the electromagnetic source emitting a beam, and an array of radiation sensors coupled to the object to receive radiation from the radiation source, responses of the sensors indicating **a change in shape of the object.**

Breecher discloses an apparatus for determining changes in the shape of an object comprising an electromagnetic radiation source coupled to the object, the object being selected from the group consisting of a building, a bridge, and a tower, the electromagnetic radiation emitting a shaped beam, and an array of reflectors coupled to the object to receive radiation from the radiation source and reflect radiation back to a electromagnetic radiation sensor, responses of the sensor indicating angular orientation of the shaped beam with respect to the array.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kara E Geisel whose telephone number is **571 272 2416**. The examiner can normally be reached on Monday through Friday, 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on **571 272 2800 ext. 77**. The fax phone number for the organization where this application or proceeding is assigned is **571 273 8300**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**Gregory J. Toatley, Jr.
SPE
Art Unit 2877**

K.G
KEG
August 19, 2007

Gregory J. Toatley, Jr.
Supervisory Patent Examiner

